Response to Marr's and Zuriff's Reviews of *Understanding Behaviorism: Science, Behavior, and Culture*

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I wrote this book because I had been teaching an undergraduate course on behaviorism—as distinct from behavior analysis—for several years using Skinner's *About Behaviorism* and *Beyond Freedom and Dignity* as the texts. Sophomores at my university found Skinner difficult going; I would counsel them to read the text, listen to me, and then read the text again. I have long suspected that Skinner is almost impossible to understand unless you already know what he is trying to say. Eventually it seemed that committing my explanations to paper might allow the students to get the ideas without struggling through Skinner.

When I set out to make a coherent and accessible presentation of modern behaviorism, I wanted to try to say nothing original; I thought I would be able just to describe ideas every behaviorist would recognize as familiar. I soon discovered this goal to be impossible, because there were too many gaps, there were too many loose ends, and there was no unambiguous integrating framework. To present a coherent picture, I had to fill gaps and create links. For example, countercontrol needed to be better defined and worked into an understanding of all sorts of relationships, including government, and the whole discussion of individual and social goals needed to be placed in the larger conceptual framework of evolutionary theory.

As a result, I guessed that no behaviorist would agree with every idea in

the book, but I suspected that different behaviorists would disagree with different ideas. I hoped, however, that, despite disagreeing with some of the ideas, they would find the book useful for presenting behaviorism to undergraduates. The reviews by Marr and Zuriff bear out these expectations. Both have quarrels, but different quarrels, and both see the book as a contribution to pedagogy.

Writing about behaviorism, I aimed to present it as a distinctive view that may apply to all areas of human existence. My method was threefold: (a) to criticize traditional terms (e.g., *free will, knowledge, language*); (b) to analyze the circumstances under which such terms are likely to occur (i.e., as verbal behavior); and (c) to suggest how a plausible behavioral account may be constructed. To me, these seemed to be ambitious enough goals for a book that would present modern behaviorism as alive and powerful to undergraduates and educated laypeople. At the University of New Hampshire—and probably at many other universities—most psychology courses present material to students in an openly mentalistic framework and with no suggestion that alternatives exist. My behaviorism course works a bit to offset this lopsided situation. I hear from other instructors that some of my students raise questions in other classes. Parallel events occur with the graduate students, particularly those who serve as teaching assistants in the behaviorism course. My hope is that others will attempt similar courses, using the book, with similar effects.

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Response to Marr's Review

From Marr's review, it appears that he found the book both useful and provocative. Whether the accounts are oversimplified must be judged in relation to the goals. If the readers see that behavioral treatments of topics like freedom, justice, and responsibility are possible, even though behavior analysts are far from a complete analysis or solutions to all the world's problems, that seems like a lot. Marr would like more—and so would I—but such questions have no final answers.

One point on which Marr dwells seems off to me: his discussion of my treatment of responsibility. Holding someone responsible means imposing consequences on their behavior. Imposing consequences that usually would punish constitutes an attempt to reduce the future likelihood of such behavior. Imposing consequences that usually would reinforce constitutes an attempt to maintain or increase the future likelihood of such behavior. Nowhere did I suggest that one can reinforce or punish a history. Imposing consequences is itself operant behavior, reinforced by its consequences, some of which (by no means all; judges have constituencies) consist of changes in the target behavior. The discriminative stimuli for imposing consequences (e.g., the effects of the target behavior on *us*) include events like a guilty verdict from a jury and the conclusion of a concert. As I explain in the chapter on purpose and elsewhere in the book, whether or not any behavior, including imposing consequences, is done *on purpose* depends on what reinforces the behavior (sentencing or applauding); a sentence given out of political necessity or applause given out of politeness cannot be called imposing consequences *for the purpose* of changing or maintaining behavior.

Response to Zuriff's Review

Although Zuriff's overall assessment of the book is positive, even if he sometimes gives it faint praise ("com-

mendable job," p. 400), he has used the occasion to debate some fine philosophical points. About 40% of the review is devoted to quarreling with 2 of 14 chapters. The longest chapters in the book, for example, take up verbal behavior (chap. 7) and evolution of culture (chap. 13); yet the latter is scarcely mentioned, and the former receives no mention at all. As a result, the review is of limited usefulness to someone who has not read the book. It does, however, sharpen the debate over the philosophical underpinnings of radical behaviorism.

From my study of behaviorism, I concluded that modern behaviorism is characterized by two affinities: to philosophical pragmatism and to evolutionary theory. These supply whatever unity there is in radical behaviorism. I stand by this insight, and I suspect Zuriff might actually agree with it, even if my presentation could be improved. Here I will respond to some points he raises.

Realism and pragmatism. There is a view—let us call it the *received view*—so prevalent in Western societies that it is rarely questioned: the view that there is a real world "out there," a subjective world "in here," and it is in this inner world or space where I, my true self, reside. When laypeople and many psychologists write about consciousness in particular and behavior in general, they nearly always assume this view implicitly.

This view I call *realism*. It corresponds to no one version of realism recognized by philosophers, and probably it conflates several, but I call it realism because it gave birth to and is present in all forms of philosophical realism worthy of that name. It is assumed, for example, in Russell's (1965) sense-data theory. Philosophers are fond of distinctions. They distinguish many forms of free will and of determinism, and sometimes they claim to reconcile the two, but there is a conflict that is named by the terms *free will* and *determinism* nonetheless, and that conflict concerns us as behav-

iorists, regardless of the philosophers' distinctions. Similarly, there is this view that is well named by the word *realism,* regardless of the philosophers' distinctions.

When this view is taken as the basis for philosophy of science, the inner, subjective world is denigrated in favor of the outer, objective world of the senses. Intersubjective agreement becomes the chief criterion of what is worthy to be studied. Examples of such treatments may be found in Russell's *On the Philosophy of Science* (1965) or popular presentations such as McCain and Segal's *The Game of Science* (1988).

When this view is both taken as the basis for philosophy of science and applied to the science of behavior, the result is methodological behaviorism. It is clear from Skinner's (1945) paper on operationism that he considered his colleagues S. S. Stevens and E. G. Boring to be prime examples. I agree and go further to say that many psychologists whom I have talked to, and even many behaviorists who would be surprised to be so labeled, are, in fact, methodological behaviorists.

It is this received view, whether you call it realism or not, that radical behaviorism rejects. *Radical* derives from the same Latin word as *root.* Skinner, who chose words carefully, probably intended that his brand of behaviorism differed at its root from the received view. He rejected not only intersubjective agreement but also subjective–objective dualism.

Instead of the received view, Skinner turned to pragmatism. There seems to be little doubt about this. By Skinner's own testimony, he was much affected by reading Mach's *Science of Mechanics* (1933/1960). His precepts often echo Mach's. For example, Skinner's criterion of "smooth curves" for the identification of controlling variables and response definition parallels Mach's assertion that explanation consists of economical description, and it has the same origin in pragmatism. Skinner's debt to pragmatism is dis-

cussed at length in a paper by Day (1980).

There is good evidence, both historical and textual, for aligning radical behaviorism with philosophical pragmatism. I am surprised at Zuriff's skepticism on this point; he himself wrote, "Skinner adopts an extreme form of pragmatism" (Zuriff, 1985, p. 259). To the extent that any later behaviorism builds on Skinner, that behaviorism is rooted in pragmatism.

The dichotomy between subjective inner world versus objective outer world is rejected by Skinner on pragmatic grounds. It is rejected by Ryle (1949) on logical grounds (see also Rachlin, 1980, 1985). Radical behaviorism assumes neither world, because such assumptions are unproductive and incoherent. I am puzzled over Zuriff's assertion that he doesn't understand this point or that the accounts offered in the remainder of the book seem to contradict it. From the fourth chapter onwards, I adopt a perfectly pragmatic view, introducing a few concepts and using them over and over to describe complex phenomena with those terms. That is what Mach and James considered explanation—description in terms that are familiar.

Self-control. There is a large and growing body of research and theory about self-control in a behavior-analytic framework. A review by Logue was published in *Behavioral and Brain Sciences* (1988), and a book by Logue, *Self-Control: Waiting Until Tomorrow for What You Want Today* (1995), is now available. This research has passed over Skinner's (1953) definition of self-control. Self-control is defined as choice: behaving in agreement with long-term contingencies when one might have behaved in agreement with short-term contingencies. What Skinner called self-control (precurrent behavior) would today be considered behavior having the effect of making self-control more likely. The research distinguishes commitment strategies and stimulus strategies. Commitment consists of acting so as to make im-

pulsiveness impossible, that is, to re-
move choice (Rachlin & Green, 1972).
Stimulus strategies consist of acting so
as to generate discriminative stimuli
that make self-control more likely, for
example, by generating rules (Baum,
1995).

It appears that researchers on self-
control found the concept of precurrent
behavior to be too broad to be useful.
It may still, however, have some use in
discussing problem solving, as I illus-
trate in chapter 8 of my book. Zuriff's
attachment to the term seems out of
keeping with developments since 1953.

Evolutionary theory. I have dis-
cussed elsewhere the necessity for be-
havior analysis to integrate with evo-
lutionary theory (Baum, 1994, 1995).
Even if it adds a speculative element,
that is more than compensated for by
the coherence the conceptual frame-
work adds. Behavior analysts who con-
tinue to try to understand human be-
havior without an evolutionary per-
spective run the risk of becoming in-
tellectually irrelevant.

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